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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,040	02/13/2004	Kyu-cheol Shin	101-1014	1149
38209	7590	07/26/2005	EXAMINER	
STANZIONE & KIM, LLP 1740 N STREET, N.W., FIRST FLOOR WASHINGTON, DC 20036			GRAINGER, QUANA MASHELL	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/777,040

Applicant(s)

SHIN, KYU-CHEOL

Examiner

Quana M. Grainger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-28, 34 and 35 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 8, 29 and 30 is/are rejected.
- 7) ☒ Claim(s) 3-6 and 31-33 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 2-13-2004 was considered by the examiner.

Drawings

3. The content of the drawings are approved by the examiner.

Title

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 8 and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Kodama (6,058,275). The method of controlling development in an electrophotographic image forming apparatus by Kodama comprises: measuring a developing current flowing between a photosensitive medium and a developing roller in a state in which a surface of the photosensitive medium is charged to a charged potential, and a developing potential is applied to the developing roller; calculating a capacitance of the photosensitive medium using the measured developing current, the charged potential, and the developing potential; calculating a thickness of a photosensitive film of the photosensitive medium using the capacitance; comparing the thickness of the photosensitive film with a preset allowable minimum thickness; and displaying information concerning replacement of the photosensitive medium with a new one when the thickness of the photosensitive film is less than the allowable minimum thickness (figure 12; column 7, line 12 – column 10, line 37; column 14, lines 57-61).

Kodama teaches a method of controlling development in an electrophotographic image forming apparatus (figure 12), the method comprising: measuring a developing current flowing between a developing roller and a photosensitive medium; calculating a value representing at least one of a thickness of a photosensitive film of the photosensitive medium, a thickness of a developer on a surface of the developing roller, and a quantity of development on the surface of the photosensitive medium using the measured developing current; and generating information concerning replacement of at least one of the photosensitive medium, the developing roller, and the developer, according to the calculated value (column 7, line 12 – column 10, line 37; column 14, lines 57-61). The method of controlling development in the electrophotographic image forming apparatus further comprising controlling development parameters according to the

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calculated value to control development on the photosensitive medium (column 7, line 12 – column 10, line 37; column 14, lines 57-61).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodama in view of Sato. Kodama does not teach a supply roller in the developing device. Sato teaches a developing device having a developing roller 10 and a supplying roller 11 (figure 1).

Kodama in view of Sato suggest an electrophotographic image forming apparatus comprising: a photosensitive medium; a charging unit to charge a surface of the photosensitive medium to a uniform potential; an exposure unit to scan light over the surface of the photosensitive medium to form an electrostatic latent image on the surface of the photosensitive medium; a developing roller to develop the electrostatic latent image by applying a developer to the electrostatic latent image; a developer supplying roller to supply the developer to the developing roller; a transfer unit to transfer the developed image on the surface of the photosensitive medium to a sheet of print paper; a current measuring unit to measure a developing current flowing between the developing roller and the photosensitive medium; and a controlling unit to calculate a value representing at least one of a thickness of a photosensitive film of the photosensitive medium, a thickness of the developer on a surface of the developing roller, and a quantity of development on the surface of the photosensitive medium using the

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measured developing current, and to display information concerning replacement of a consumable or to control development parameters according to the calculated value. The current measuring unit is a current measuring circuit provided between the developing roller and a developing power source applying a developing potential to the developing roller.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teaching of Kodama with the image forming device of Sato to obtain stable transfer regardless of the state of the recording medium and the toner (column 1, lines 42-45).

Allowable Subject Matter

9. Claims 3-6 and 31-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 9-28 and 34-35 are allowed.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quana M. Grainger whose telephone number is 571-272-2135. The examiner can normally be reached on 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Quana M Grainger
Primary Examiner
Art Unit 2852

QG